



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/899,916	07/09/2001	Simon Tam	110031	4508

25944 7590 07/02/2003

OLIFF & BERRIDGE, PLC  
P.O. BOX 19928  
ALEXANDRIA, VA 22320

EXAMINER

LIANG, REGINA

ART UNIT	PAPER NUMBER
----------	--------------

2674

DATE MAILED: 07/02/2003

9

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/899,916

Applicant(s)

TAM, SIMON

Examiner

Regina Liang

Art Unit

2674

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 09 July 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4,7,8.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Drawings*

1. Figures 1 and 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 12, 13, 19, 22-25, 28-32 are rejected under 35 U.S.C. 102(b) as being anticipated by Myers et al (US. PAT. NO. 3,223,151 hereinafter Myers).

As to claim 1, 13, 22-25, 30, 31, Figs. 1, 4 of Myers discloses a driver circuit for current driver element (16, 16'), the circuit comprising an n-channel transistor and a complementary p-channel transistor (20 and 26 in Fig. 1, or 20' and 26' in Fig. 4, see col. 3, lines 37-39) connected so as to operatively control the current supplied to the current driven element (16, 16') as claimed.

Art Unit: 2674

As to claims 12, 19, Myers teaches the current driven element is an electroluminescent element (EL).

As to claims 28, 29, Myers teaches an electronic apparatus incorporating an electro-optical device as claimed.

As to claim 32, Myers teaches determining a gate voltage of at least one of the transistors based on a predetermined current (see Fig. 2).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2, 3, 14, 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Myers in view of Yanai et al (US. PAT. NO. 6,011,532 hereinafter Yanai).

As to claims 2, 14, Myers does not disclose the n-channel and p-channel transistors compress polysilicon thin film transistors. However, Yanai teaches it is well known in the art the complementary n-channel and p-channel transistors compress polysilicon thin film transistors (col. 6, lines 55-64 for example). Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the complementary n-channel and p-channel transistors of Myers to comprise polysilicon thin film transistors as taught by Yanai so as to provide a light weight and compact display and to improve the quality of the display.

Art Unit: 2674

As to claims 3, 15, Myers teaches the complementary n-channel and p-channel transistors are spatially arranged in close proximity to each other as claimed.

6. Claims 4, 11, 16, 20, 21, 26, 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Myers in view of Ikeda (US. PAT. NO. 5,714,968).

As to claims 4, 16,, Myers does not disclose the driver circuit comprising respective storage capacitors and respective switching means for the n-channel and p-channel transistors. However, Fig. 9 of Ikeda teaches a driver circuit for driving an EL element comprising respective storage capacitors (18, 19) and respective switching means (14, 15) for the two control transistors. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Myers' the driver circuit comprising respective storage capacitors and respective switching means for the n-channel and p-channel transistors so as to provide a current-dependent light-emitting element drive circuit which is capable of driving the current-dependent light-emitting element with a reduced current and voltage (col. 2, lines 14-18 of Ikeda).

As to claim 11, Ikeda teaches the transistors comprising polysilicon thin film transistors (col. 10, lines 26-28).

As to claims 20, 21, 26, Ikeda teaches the current driven element is an organic electroluminescent element (col. 11, lines 19-20).

As to claim 27, Fig. 9 of Ikeda teaches the gates of two transistors are each connected to a respective capacitor (18, 19).

Art Unit: 2674

7. Claims 5-10, 17, 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Myers and Ikeda as applied to claims 4 and 16 above, and further in view of the admitted prior art (Fig. 2 and page 2, line 7 to page 3, line 10 of the specification).

As to claims 5, 17, Myers as modified by Ikeda does not disclose the driver circuit having a programming stage and a reproduction stage. However, Fig. 2 of the admitted prior art teaches the driver circuit having a programming stage and a reproduction stage. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the driver circuit of Myers as modified by Ikeda to have the programming stage and the reproduction stage as taught by the admitted prior art so as to provide an improved driver circuit for controlling the EL element.

As to claims 6, 7, Fig. 9 of Ikeda shows the first switching means (14 or 15) and the source current data signals (12 or 13) are connected.

As to claim 10, Ikeda teaches the transistors comprising polysilicon thin film transistors (col. 10, lines 26-28).

As to claims 8, 18, the admitted prior art teaches the switching transistor connected to the transistor to act as diodes during the programming stages.

As to claim 9, Fig. 2 of the admitted prior art teaches the switching means comprise p-channel transistors.

### ***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Art Unit: 2674

Yamazaki et al (US. PAT. NO. 6,369,788) teaches an electro-optical device and driving method for the same.

Bu (US. PAT. NO. 6,433,488) teaches an OLED active driving system with current feedback.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Regina Liang whose telephone number is (703) 305-4719. The examiner can normally be reached on Monday-Friday from 9AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe, can be reached on (703) 305-4709.

**Any response to this action should be mailed to:**

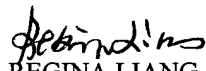
Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**or faxed to:**

(703) 872-9314, (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

  
REGINA LIANG  
PRIMARY EXAMINER  
ART UNIT 2674

RL